CLAIMS

What is claimed is:

1. A smart compensation wireless piconet device, comprising:

a wireless piconet front end including a receiver portion and a transmitter portion; and

a frequency offset history table adapted to contain a plurality of entries each corresponding to a past frequency offset of a device in a piconet including said smart compensation wireless piconet device;

wherein an expected center frequency of a signal received by said receiver portion is adjusted based on one of said plurality of entries in said frequency offset history table corresponding to a device transmitting said signal.

2. The smart compensation wireless piconet device according to claim 1, further comprising:

a local oscillator to control a transmit frequency of said transmitter portion of said wireless piconet front end.

3. The smart compensation wireless piconet device according to claim 1, wherein:

said wireless piconet front end is a BLUETOOTH front end.

4. A method for receiving in a receiving piconet device an information packet transmitted from a transmitting piconet device within a piconet network, comprising:

determining a center frequency of a channel used to transmit at least a portion of said information packet;

looking up a past frequency offset value of said transmitting piconet device;

adjusting a center frequency of an expected frequency of said information packet in a receiving portion of said receiving piconet device; and

receiving said information packet in said receiving piconet device.

5. The method for receiving in a receiving piconet device an information packet transmitted from a transmitting piconet device within a piconet network according to claim 4, further comprising:

altering a local oscillator of said receiving piconet device such that a transmit frequency of a transmitter of said receiving piconet device is offset by an amount approximately equal and opposite to a past amount of frequency offset calculated from a past information packet received from said transmitting piconet device.

6. The method for receiving in a receiving piconet device an information packet transmitted from a transmitting piconet device within a piconet network according to claim 4, further comprising:

calculating an actual frequency offset based on said received information packet.

7. The method for receiving in a receiving piconet device an information packet transmitted from a transmitting piconet device within a piconet network according to claim 6, further comprising:

replacing in said receiving piconet device said past frequency offset value for said transmitting piconet device with a new frequency offset calculated based on said calculated actual frequency offset.

8. The method for receiving in a receiving piconet device an information packet transmitted from a transmitting piconet device within a piconet network according to claim 4, wherein:

said receiving piconet device and said transmitting piconet device are each BLUETOOTH devices.

9. Apparatus for receiving in a receiving piconet device an information packet transmitted from a transmitting piconet device within a piconet network, comprising:

means for determining a center frequency of a channel used to transmit at least a portion of said information packet;

means for looking up a past frequency offset value of said transmitting piconet device;

means for adjusting a center frequency of an expected frequency of said information packet in a receiving portion of said receiving piconet device; and

means for receiving said information packet in said receiving piconet device.

10. The apparatus for receiving in a receiving piconet device an information packet transmitted from a transmitting piconet device within a piconet network according to claim 9, further comprising:

means for altering a local oscillator of said receiving piconet device such that a transmit frequency of a transmitter of said receiving piconet device is offset by an amount approximately equal and opposite to a past amount of frequency offset calculated from a past information packet received from said transmitting piconet device.

11. The apparatus for receiving in a receiving piconet device an information packet transmitted from a transmitting piconet device within a piconet network according to claim 9, further comprising:

means for calculating an actual frequency offset based on said received information packet.

12. The apparatus for receiving in a receiving piconet device an information packet transmitted from a transmitting piconet device within a piconet network according to claim 11, further comprising:

means for replacing in said receiving piconet device said past frequency offset value for said transmitting piconet device with a new frequency offset calculated based on said calculated actual frequency offset.

13. The apparatus for receiving in a receiving piconet device an information packet transmitted from a transmitting piconet device within a piconet network according to claim 9, wherein:

said receiving piconet device and said transmitting piconet device are each BLUETOOTH devices.